

file



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,114	08/20/2001	Kazutomo Ushijima	500.40525X00	4396

20457 7590 01/14/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-9889

EXAMINER
----------

LE, DEBBIE M

ART UNIT	PAPER NUMBER
----------	--------------

2177

DATE MAILED: 01/14/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/932,114

Applicant(s)

USHIJIMA ET AL.

Examiner

DEBBIE M LE

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated over Carino (US Patent 6,651,072 B1).

As per claims 1 and 7, Carino discloses a system for performing query processing comprising:

a predicate (relation = link-list of attribute objects, col. 7, line 12) dictionary (library, col. 8, lines 12-15) including information on connections among predicates (two predicate expressions) used in the query processing and on strengths of the connections (col. 7, lines 49-67); and query expansion (parser, fig. 3a, # 306) means for referring to the connections among predicates and the strength of the connections included in the predicate dictionary to convert (transforming, abstract, line 4, col. 7, line 45), a query (col. 7, lines 42-46), which is thrown into the integrated database system (col. 1, lines 51), into one or more query sets (transforming the database query into the database management system command (abstract) (set of commands, col. 14, lines 2-3).

**As per claim 2**, Carino teaches an integrated database system according to claim 1, wherein, when the connections among predicates by which the query conversion can be performed exist (updating or modifying existing objects, col. 11, line 3) in the predicate dictionary (fig. 3a, resolver 308, *recording object structures*, col. 8, line 12) the query conversion by the query expansion means referring to the predicate dictionary is repetitively applied (*using the information which the resolver 308 recorded: appends statisticals, static cost, and historical usage information to the parse tree objects*, col. 8, lines 15-16. This information is later used to optimize the query plan (col. 8, line 17) = *repetitively applied*).

**As per claim 3**, Carino teaches an integrated database system according to

claim 1, further comprising: specification descriptions (Global Data Dictionary) concerning query processing capabilities of the external databases (static cost, historical usage, col. 8, lines 22-24); and query extraction means for referring to the specification descriptions to extract queries, which can be executed using the external databases, from the converted query set (col. 8, lines 45-52, col. 14, lines 21-32).

**As per claim 4**, Carino teaches an integrated database system according to claim 1, further comprising query selection means for referring to the strengths of the connections, which are set in the predicate dictionary, to select an appropriate combination of queries from the converted query set (col. 8, lines 53-67, col. 9, lines 1-2).

**As per claim 6**, Carino teaches an integrated database system according to claim 1, further comprising query plan merging means for generating a query plan by merging the queries in the converted query set (col. 14, lines 1-32).

#### ***Allowable Subject Matter***

The prior art of record fails to teach wherein, when the query selection means selects queries, a lower limit of a approximation level and an upper limit of an execution cost both of which are specified in advance are referred.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose phone number is (703) 305-9601 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBBIE M LE whose telephone number is 703-308-6409. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Debbie Le

Jan. 9, 2004.

DEBBIE M LE  
Examiner  
Art Unit 2177



GRETA ROBINSON  
PRIMARY EXAMINER